

**AMENDMENTS TO THE CLAIMS:**

Kindly cancel claim 34 without prejudice, and amend claims 1, 13, 21, 24 and 33 as set forth below. This listing of claims will replace all prior versions and listings of claims in the application.

**Claim 1 (currently amended):** A method for recovering an application from a runtime fault, the method comprising steps of:

receiving an exception caused due to a runtime fault in a thread executing an instruction of a C++ based application;

dispatching the exception to an exception handler;

trapping the exception before the exception reaches the exception handler when the exception handler is a top level exception handler which terminates the application;

translating the trapped exception into a C++ exception that the C++ based application is capable of handling, wherein the trapped exception is translated into the C++ exception which is able to be resolved by an application defined C++ exception handler;

determining if there is an application based C++ exception handler which is capable of resolving the translated exception;

terminating the thread that caused the exception when there is no C++ based exception handler which is capable of resolving the translated exception; [[and]]

calling an application defined callback that supplies application-specific handling which re-executes the instruction and continues at a next line of code of the application; and

continuing execution of the application.

**Claims 2-5 (canceled).**

**Claim 6 (previously presented):** The method recited in claim 1, wherein the continuing step allows continuing execution of the application after the thread is terminated.

HAYES SOLOWAY P.C.  
30 W. CUSHING STREET  
TUCSON, AZ 85701  
TEL. 520.882.7623  
FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567

**Claims 7-8 (canceled).**

**Claim 9 (previously presented):** The method recited in claim 1 further comprising a step of logging state information representing the state that the application was in before occurrence of the exception caused the termination of the thread.

**Claim 10 (original):** The method recited in claim 9 further comprising a step of forwarding the logged information to a remote database over a computer network.

**Claim 11 (original):** The method recited in claim 10 further comprising steps of:

receiving a recommendation from the remote database; and

informing the recommendation to the user.

**Claim 12 (original):** The method recited in claim 9 further comprising a step of forwarding a bug report to a bug report centre over a computer network.

**Claim 13 (currently amended):** A method for recovering an application from a runtime fault in a thread, the application being executed under an operating system having one or more low level exception handlers and a top level exception handler, the method comprising steps of:

trapping an exception that is dispatched to the top level exception handler before the exception reaches the top level exception handler, the exception being caused due to a runtime fault in a thread executing an instruction of a C++ based application, a default action of the top level exception handler being to terminate the application upon receipt of exceptions;

translating the trapped exception into a C++ exception that the C++ based application is capable of handling, wherein the trapped exception is translated into the C++ exception which is able to be resolved by an application based C++ exception handler;

the method further comprises a step of determining if there is an application based C++ exception handler which is capable of resolving the translated exception;

HAYES SOLOWAY P.C.  
30 W. CUSHING STREET  
TUCSON, AZ 85701  
TEL. 520.882.7623  
FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567

terminating the thread that caused the exception when there is no C++ based exception handler which is capable of resolving the translated exception; [[and]]  
calling an application defined callback that supplies application-specific handling which re-executes the instruction and continues at a next line of code of the application; and  
continuing execution of the application.

**Claims 14-16 (canceled).**

**Claim 17 (previously presented):** The method recited in claim 13 further comprising a step of logging state information representing the state that the application was in before occurrence of the exception caused the termination of the thread.

**Claim 18 (original):** The method recited in claim 17 further comprising a step of forwarding the logged information to a remote database over a computer network.

**Claim 19 (original):** The method recited in claim 18 further comprising steps of:

receiving a recommendation from the remote database; and  
informing the recommendation to the user.

**Claim 20 (original):** The method recited in claim 17 further comprising a step of forwarding a bug report to a bug report centre over a computer network.

**Claim 21 (currently amended):** An application recovery system for recovering an application from a runtime fault, the application recovery system comprising:

an exception dispatcher for receiving an exception caused due to a runtime fault in a thread executing an instruction of a C++ based application, and dispatching the exception to an exception handler;

an exception trapper for trapping the exception before the exception causes termination of the application;

HAYES SOLOWAY P.C.  
30 W. CUSHING STREET  
TUCSON, AZ 85701  
TEL. 520.882.7623  
FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567

an exception translator for translating the exception trapped by the exception trapper into a C++ exception that the C++ based application is capable of handling;

a trapped exception handler for handling the trapped exception, the trapped exception handler having:

an exception handler selector for determining if there is an application based C++ exception handler that is capable of resolving the exception translated by the exception translator; [[and]]

a thread terminator for terminating the thread when there is no C++ based exception handler that is capable of handling the translated exception;

a crash recovery manager for calling an application defined callback that supplies application-specific handling which re-executes the instruction and continues at a next line of code of the application; and

an executor for continuing execution of the application.

**Claim 22 (canceled).**

**Claim 23 (previously presented):** The application recovery system as claimed in claim 21, wherein the exception trapper is provided in place of a top level exception handler which terminates the application.

**Claim 24 (currently amended):** An application recovery system for recovering an application from a runtime fault caused in a thread, the application running under an operating system having an exception dispatcher, one or more low level exception handlers and a top level exception handler which terminates the application, the application recovery system comprising:

an exception trapper placed between the exception dispatcher and the top level exception handler for trapping an exception before the exception reaches the top level

exception handler, the exception being caused due to a runtime fault in a thread executing an instruction of a C++ based application;

an exception translator for translating the trapped exception into a C++ exception that the C++ based application is capable of handling; and

a trapped exception handler for handling the trapped exception, the trapped exception handler having:

an exception handler selector for determining if there is an application based C++ exception handler that is capable of resolving the exception translated by the exception translator; [[and]]

a thread terminator for terminating the thread when there is no C++ based exception handler that is capable of handling the translated exception[[.]]; and

a crash recovery manager for calling an application defined callback that supplies application-specific handling which re-executes the instruction and continues at a next line of code of the application.

**Claims 25-27 (canceled).**

**Claim 28 (previously presented):** The application recovery system recited in claim 24, wherein the trapped exception handler further comprises a state restorer for restoring the state that the application was in before the fault occurred to continue the execution of the application.

**Claim 29 (original):** The application recovery system recited in claim 24 further comprising a state information logger for logging information of the state that the application was in before the fault occurred.

HAYES SOLOWAY P.C.  
30 W. CUSHING STREET  
TUCSON, AZ 85701  
TEL. 520.882.7623  
FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567

**Claim 30 (original):** The application recovery system recited in claim 29 further comprising a query generator for generating a query including the state information to query a recommendation from a remote database over a computer network.

**Claim 31 (original):** The application recovery system as claimed in claim 30 further comprising a user advisor for receiving a recommendation from the remote database and informing the user of the recommendation.

**Claim 32 (original):** The application recovery system as claimed in claim 30 wherein the query generator has a bug report generator for forwarding a bug report with the state information to a bug report centre.

**Claim 33 (currently amended):** A computer readable memory element storing the instructions or statements for use in the execution in a computer of a method for recovering an application from a runtime fault, the method comprising steps of:

receiving an exception caused due to a runtime fault in a thread executing an instruction of a C++ based application;

dispatching the exception to an exception handler;

trapping the exception before the exception reaches the exception handler when the exception handler is a top level exception handler which terminates the application;

translating the trapped exception into a C++ exception that the C++ application is capable of handling, wherein the trapped exception is translated into the C++ exception which is able to be resolved by an application defined C++ exception handler;

determining if there is an application based C++ exception handler which is capable of resolving the translated exception;

terminating the thread that caused the exception when there is no C++ based exception handler which is capable of resolving the translated exception; [[and]]

HAYES SOLOWAY P.C.  
30 W. CUSHING STREET  
TUCSON, AZ 85701  
TEL. 520.882.7623  
FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567

calling an application defined callback that supplies application-specific handling which  
re-executes the instruction and continues at a next line of code of the application; and  
continuing execution of the application.

**Claim 34 (cancelled)**

HAYES SOLOWAY P.C.  
30 W. CUSHING STREET  
TUCSON, AZ 85701  
TEL. 520.882.7623  
FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567